

REMARKS

Claims 14-36 are pending. Claims 1-13 have been cancelled without prejudice. Claims 14 and 22 have been amended. Claims 29-36 have been added. No new matter has been added.

35 U.S.C. 101

Claims 1, 14 and 22 stand rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. Claim 1 has been cancelled. Claims 14 and 22 have been amended to include the Examiner's suggested language of "A computer executable method."

35 U.S.C. 103(a)

Claims 1-13 stand rejected under 35 U.S.C. 103(a) as being obvious over UK Patent Application GB 2 307 571 A to Takasawa et al ("Takasawa"). Since claims 1-13 have been cancelled, this rejection is moot.

Claims 14-28 stand rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 6,009,436 to Motoyama et al. ("Motoyama") in view of UK Patent Application GB 2 307 571 A to Takasawa et al ("Takasawa"). The applicant respectfully disagrees, because Motoyama and Takasawa fail to disclose or suggest, alone or in combination, at least the use of common patterns identified in different documents to map elements from a format of a first source document to format of one or more second source documents, which all of claims 14-28 require.

Claim 14 recites a computer executable method of converting a format of a first source document to a format of a similarly structured second source document. The method includes identifying patterns common to the first and second source documents and using the identified common patterns to map elements and sub-elements in the first source document to equivalent elements and sub-elements in the second source document.

Motoyama discloses "a method, apparatus, and computer program product for mapping a first structured information format to a second structured information format." Abstract. Specifically, the method is directed to mapping a SGML document to a HTML document. See col. 6, lines 12-19. The method, apparatus and computer program product of Motoyama "provide a user with a graphic tool to transform documents written in a cryptic source SGML format into another target structure format." Col. 3, lines 38 – 42. User interaction is an input to

map a SGML document to a HTML document. See, e.g., Figs. 4, 5, 6A, 12B, and 12C. As shown in Figs. 12B and 12C, a user is presented with a Map Edit dialog box 700 displaying a list of SGML Tags 702 and a list of Legal HTML Tags 706. For a given SGML Tag 702, the user can select a Legal HTML tag 706 to add to a current HTML Tag list 704 listing the HTML tag(s) to which the SGML Tag maps. Col. 16, lines 34-67. User input is used by Map Editor 208, along with a structural description of system A 230 and a structural description of system B, to produce a map 212 to be used to transform a SGML document into a HTML document. See col. 11, lines 45-65.

The Examiner recognizes that Motoyama does not disclose a step of identifying patterns common to two differently-formatted documents, which is recited in the first step of claim 14. But Motoyama also fails to disclose or suggest using common patterns to map elements from one format to elements of another format, recited in the second step of the claim. While Motoyama does disclose mapping elements of one format to elements of another, it does so based only on user input specifying the mapping. Nowhere does Motoyama disclose or suggest defining the mapping based on identified patterns common to the two documents. Thus, Motoyama does not disclose a method including the steps of "using the identified common patterns to map elements and sub-elements in the first source document to equivalent elements and sub-elements in the second source document," as recited in claim 14

Takasawa discloses a method for automatically generating a document type definition ("DTD") for SGML based on a plurality of sample documents. Abstract. Takasawa discloses a DTD generating apparatus that receives sample documents prepared by a user as an input and extracts logical structure information from the sample documents to generate a DTD. Page 8, line 21 – page 10, line 10.

But like Motoyama, Takasawa also does fails to disclose or suggest using identified common patterns to map elements and sub-elements in a first source document to equivalent elements and sub-elements in a second source document, as recited in claim 14. Takasawa does not discuss using an identified common pattern to map elements and sub-elements from one document format to another. Takasawa discloses generating a DTD based on sample documents of one type.

The applicant respectfully submits that the proposed combination of Motoyama and Takasawa would not result in the invention as claimed. At most, that combination would appear to suggest addressing the problem of mapping elements from one document format to elements of another format by generating a DTD for each format based on patterns in the respective formats according to the techniques of Takasawa, and then mapping elements of one DTD to elements of the other DTD based on user input, as described in Motoyama. Nothing in either Motoyama or Takasawa discloses or suggests identifying common patterns in differently formatted documents, or using common patterns to map from one format to another. Because Motoyama and Takasawa, alone and in combination, fail to disclose or suggest at least one limitation of claim 14, the applicant respectfully submits that no *prima facie* showing of obviousness has been made. Thus, claim 14 and its dependent claims 15-21 are allowable over the combination of Motoyama and Takasawa.

Claim 22 recites a computer implemented method of converting the format of a source document to the format of a set of source documents. The method includes identifying patterns common to a source document and a set of source documents, and using the identified common patterns to map elements and sub-elements in the common pattern of the source document to equivalent elements and sub-elements in the common pattern of the set of source documents. As discussed above, however, neither Motoyama nor Takasawa, either alone or in combination, discloses or suggests using identified common patterns to map elements from one document format to another. Accordingly, claim 22 and its dependent claims 23 and 24 are allowable over Motoyama and Takasawa for at least the reasons discussed above in connection with claim 14.

Claims 25 recites a computer program including instructions to perform the method recited in claim 14, and claim 34 recites a computer program including instructions to perform the method recited in claim 22. Thus, claims 25 and 34, and their dependent claims 26-27, 29-33 and 35-36, are allowable over the combination of Motoyama and Takasawa.

Claim 28 recites a computer system including "a computer processor configured by a mapping program to identify patterns common to the source document and the set of source documents and map elements and sub-elements in the common pattern of the source document to equivalent elements and sub-elements the common pattern of the set of source documents." As discussed above with reference to claim 22, the combination of Motoyama and Takasawa would

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not result in a method identifying "patterns common to the source document and the set of source documents and map elements and sub-elements in the common pattern of the source document to equivalent elements and sub-elements the common pattern of the set of source documents."

Thus, the combination of Motoyama and Takasawa would not result in a computer system including a computer processor configured by a mapping program to perform this step.

Therefore, claim 28 is allowable over the combination of Motoyama and Takasawa.

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be allowed. Enclosed is a check for excess claim fees and a Petition for Extension of Time. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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Version with markings to show changes made

In the claims:

Claims 1-13 have been cancelled.

Claims 14, 20-23 and 27 have been amended as follows:

14. (*Amended*) A computer executable method of converting a format of a first source document to a format of a similarly structured second source document, the method comprising:

identifying patterns common to the first and second source documents; and
using the identified common patterns to map elements and sub-elements in the first source document to equivalent elements and sub-elements in the second source document.

15. The method of claim 14, further comprising:
replacing tag names for each of the elements and sub-elements in the first source document with equivalent tag names of the elements and sub-elements in the second source document.

16. The method of claim 14, wherein identifying patterns common to the first and second source documents comprises:
examining document type definitions for the first and second source documents.

17. The method of claim 16, further comprising:
producing the document type definition for the first source document if the document type definition for the first source document does not already exist.

18. The method of claim 14, wherein identifying patterns common to the first and second source documents comprises: performing pattern matching.

19. The method of claim 14, wherein identifying patterns common to the first and second source documents comprises:

matching heuristics of the patterns in the first source document to heuristics of the patterns in the second source document.

20. (*Amended*) The method of claim [18] 19, wherein identifying patterns common to the first and second source documents further comprises:

matching heuristics of the patterns in the first source document to heuristics of the patterns in the second source document.

21. (*Amended*) The method of claim 14, wherein using the identified common patterns to map uses the identified common patterns to map automatically elements and sub-elements in the first source document to equivalent elements and sub-elements in the second source document.

22. (*Amended*) A computer executable method of converting the format of a source document to the format of a set of source documents, the set of source documents having a structure similar to the first source document, the method comprising:

identifying patterns common to the source document and the set of source documents;
mapping elements and sub-elements in the common pattern of the source document to equivalent elements and sub-elements in the common pattern of the set of source documents; and
replacing tag names for the each of the elements and sub-elements in common pattern of the source document with the equivalent tag names of the elements and sub-elements in common pattern of the set of source documents.

23. (*Amended*) The method of claim 22, wherein identifying patterns common to the source document and the set of source documents comprises:

examining document type definitions for the source document and [and] the set of source documents.

24. The method of claim 23, further comprising:
producing the document type definition for the source document if the document type definition for the source document does not already exist.

25. A computer program residing on a computer-readable medium for converting a format of a first source document to a format of a similarly structured second source document, the computer program comprising instructions causing a computer system to:

identify patterns common to the first and second source documents; and
use the identified common patterns to map elements and sub-elements of the first source document to equivalent elements and sub-elements of the second source document.

26. The computer program of claim 25, further comprising instructions to:
replace tag names for the each of the elements and sub-elements in the common pattern of the first source document with equivalent tag names of the elements and sub-elements in the common pattern of the second source document.

27. (*Amended*) The computer program of claim 26, wherein the instructions to identify patterns common to the source document and the set of source documents comprise instructions to:

examine document type definitions for the source document and [and] the set of source documents.

28. A computer system comprising:
a storage device for storing a source document and a set of source documents, the source document having a format different from that of the set of source documents; and
a computer processor configured by a mapping program to identify patterns common to the source document and the set of source documents and map elements and sub-elements in the common pattern of the source document to equivalent elements and sub-elements the common pattern of the set of source documents.

Claims 29-36 have been added:

29. (*New*) The computer program of claim 27, further comprising instructions causing a computer system to:

produce the document type definition for the first source document if the document type definition for the first source document does not already exist.

30. (*New*) The computer program of claim 25, wherein the instructions causing a computer system to identify patterns common to the first and second source documents comprises instructions causing a computer system to:
perform pattern matching.

31. (*New*) The computer program of claim 25, wherein the instructions causing a computer system to identify patterns common to the first and second source documents comprises instructions causing a computer system to:
match heuristics of the patterns in the first source document to heuristics of the patterns in the second source document.

32. (*New*) The computer program of claim 31, wherein the instructions causing a computer system to identify patterns common to the first and second source documents further comprises instructions causing a computer system to:
match heuristics of the patterns in the first source document to heuristics of the patterns in the second source document.

33. (*New*) The computer program of claim 25, wherein the instructions causing a computer system to use the identified common patterns to map uses the identified common patterns to map automatically elements and sub-elements in the first source document to equivalent elements and sub-elements in the second source document.

34. (*New*) A computer program residing on a computer-readable medium for converting the format of a source document to the format of a set of source documents, the set of source documents having a structure similar to the first source document, the computer program comprising instructions causing a computer system to:
identify patterns common to the source document and the set of source documents;

map elements and sub-elements in the common pattern of the source document to equivalent elements and sub-elements in the common pattern of the set of source documents; and replace tag names for each of the elements and sub-elements in common pattern of the source document with the equivalent tag names of the elements and sub-elements in common pattern of the set of source documents.

35. (*New*) The computer program of claim 34, wherein the instructions causing a computer system to identify patterns common to the source document and the set of source documents comprises instructions causing a computer system to:

examine document type definitions for the source document and the set of source documents.

36. (*New*) The computer program of claim 35, further comprising instructions causing a computer system to:

produce the document type definition for the source document if the document type definition for the source document does not already exist.